

TRUCK, CARGO, HEAVY, MC3 – MACK

TECHNICAL INSPECTION

INSPECTION FOR USEABILITY

This instruction is authorised for use by command of the Chief of Army. It provides direction, mandatory controls and procedures for the operation, maintenance and support of equipment. Personnel are to carry out any action required by this instruction in accordance with EMEI General A 001.

GENERAL

- 1.** This EMEI details the actions required to complete a Technical Inspection (TI) of the Truck, Heavy, MC3 – Mack – All Types (except the LRV).

NOTE

Whilst this EMEI excludes the LRV, it may be used to complete a service/TI on the cab/chassis for the vehicle. For details specific to the LRV sub-frame, refer to EMEI Vehicle G 78 Decade.

- 2.** TIs on vehicles are carried out by personnel who are suitably competent, qualified and authorised. They are carried out routinely at a maximum 12 month/10 000 km interval or earlier to establish the condition of the vehicle.

Associated Publications

- 3.** Reference may be required to the current issue of the following publications to assist with management of equipment maintenance and specifications:
 - a.** Technical Regulation of ADF Materiel Manual – Land (TRAMM-L);
 - b.** Defence Road Transport Instructions (DRTI);
 - c.** EMEI Misc Equip Q 208 – Inspection of Portable Fire Extinguishers – Equipment Inspection and Examination Data;
 - d.** EMEI Misc Equip P009-1 – POL Storage and Fuel Transfer Equipment, Regulatory Testing Requirements for Bulk Fuel Tankers – General Instruction;
 - e.** EMEI Misc Equip P 009-2 – POL Storage and Fuel Transfer Equipment, Truck and Skid Mounted, Unfired Pressure Vessels with Quick Actuating Closures – General Instruction;
 - f.** EMEI Misc Equip P 009-5 – POL Storage and Fuel Transfer Equipment Aircraft Refuelling Ancillary Equipment – General Instruction;
 - g.** EMEI Vehicle A 028-1 – Vehicles – General, B Vehicle Mounted Cranes – Technical Inspection Requirements – Miscellaneous Instruction;
 - h.** EMEI Vehicle A 029-2 – Vehicles – General, Road Testing of Medium and Heavy B Vehicles and Combinations – General Instruction;
 - i.** EMEI Vehicle A 049-1 – Towing Pintle Hooks, Medium and Heavy General Services B Vehicles – Inspection and Repair – Miscellaneous Instruction;
 - j.** EMEI Vehicle A 298-2 – Tyres and Tubes, General Service B Vehicles Tyres – Inspection for Useability;
 - k.** EMEI Vehicle A 548-1 – Vehicle Seat Belts, Inspection Data – Inspection for Useability;
 - l.** EMEI Vehicle A 598 – Miscellaneous, Total Restraint Access Module (TRAM) System – ADF Fuel and Water Tankers, All Applicable Variants – Equipment Inspection and Examination Data;
 - m.** EMEI Vehicle G 70 decade – Truck, Cargo, Heavy, MC3 – Mack;
 - n.** EMEI Vehicle G 759-1 – Truck, Tank Water, Heavy, MC3 – Mack, Wear Limits and Inspection of the Tanker Barrel Bearing Mounts – Servicing Instruction;

- o.** EMEI Vehicle G809 – Truck, Tank Fuel, AVN, Heavy, MC3 – MK I and MK II Variants – Servicing Instruction; and
- p.** EMEI Workshop H 149-1 – Vehicle Jacks – Mechanical and Hydraulic – General Instruction.

Inspection Procedure

4. Do not use ‘Keep Under Observation’ (KUO) or words to that effect within a TI. The vehicle is to be classified in accordance with the TRAMM-L. A shortened timeframe can be used between TIs if required.

DETAIL

5. Paragraphs 7 to 14 identify the systems and components that are inspected as part of the TI. Tables are used for all Mack as listed below:

- a.** Table 1– All Types, plus the following as required:
 - (1)** Table 2– cargo;
 - (2)** Table 3 – with power take-off;
 - (3)** Paragraph 10 – with twist locks;
 - (4)** Table 4 – with winch;
 - (5)** Paragraph 12 – crane;
 - (6)** Table 5 – dump;
 - (7)** Table 6 – with water tank; and
 - (8)** Table 7 – fuel tank.

6. These lists are not exhaustive and any additional systems or items identified are to be inspected and listed on the additional information tab on the work order raised using the applicable Standard Job with signatures to confirm it has been inspected.

All Types

7. The systems and components listed in Table 1 are required to be inspected for Mack – All Types.

Table 1 All Types

Serial	Description	Serial	Description
Cabin Exterior			
1	Brush guard and securing bolts	2	Bumper bar
3	Headlight protectors	4	Front and rear lifting and tie-down attachments
5	Bonnet, locks, hinges and webbing	6	Cabin mounts
7	Cabin steps and mounts	8	Doors, locks, seals and hinges (see Warning)
9	Door windows	10	Cab cowl ventilator
11	Windscreen(s)	12	Windscreen wiper arms and blades
13	Windscreen washer nozzles, hoses and reservoir	14	Fenders and corner markers
15	Panels and protective paint	16	Mudguards, corner markers and mudflaps
17	Exterior mirrors and spot mirrors	18	Exhaust muffler, pipes and mounts
Information and Warning Plates			
1	Modification plate	2	Front and rear TAC sign holders
3	Front and rear number plates	4	C of G designation plate
5	Bridge classification plate	6	Identification plate
Engine Compartment			
1	Drive belts	2	Manifolds and mounts

Table 1 All Types (continued)

Serial	Description	Serial	Description
Engine Compartment (cont.)			
3	Dipstick	4	Oil filler tube
5	Engine oil	6	Engine oil filters
7	Dynatard and connections	8	Tachometer cable and mounts
9	Engine breather	10	Engine mounts
11	Alternator 28 V and mounts	12	Air filter, restriction indicator, housing and mounts
13	Air intake hoses and clamps	14	Fuel injection pump, lines, mounts and filters
15	Air compressor, pipes and mounts	16	Air conditioner compressor, mounts and hoses (if fitted)
17	Air conditioner condenser and mounts (if fitted)	18	Air conditioner receiver/dryer and mounts (if fitted)
19	Air conditioner function test (if fitted)	20	Cabin heater, hoses and mounts
21	Turbocharger, air inlet and oil lines	22	Intercooler assembly
23	Radiator, shroud, hoses and mounts	24	Cooling fan, belts and pulleys
25	Air starter and muffler exhaust	26	Air starter lubrication system
27	Air reservoirs, drains, mounts, connections and piping	28	Power steering pump, reservoir and hoses
29	Electrical harness	30	Accelerator linkages
Chassis and Frame			
1	Jerry can carrier	2	Fuel tank(s), filters, lines and mounts
3	Stowage bin(s) and mounts	4	Spare wheel carrier(s), jack(s) and mounts
5	Reflectors	6	NATO plug and 24 V decal
7	Trailer glad hand couplers, dust covers and chains	8	Tyres and rims
9	Fire extinguishers, test tags and brackets	10	Towing pintle
Cabin Interior			
1	Clutch cable and mounts	2	Cabin trim, fittings, mounts and mats
3	Brake and clutch pedals and pads	4	Accelerator pedal and controls
5	Seat belts, mounts and inertia reels	6	Cabin roof ventilation and filter
7	Seat cushions, slides and adjusters	8	Rear window protection bars
9	Steering wheel, column and mounts	10	Dash and instrument panel
11	Control switches, knobs and levers	12	Fuses, relays, circuit breakers and cover
13	Park brake and control	14	Trailer brake and control
15	Transmission gear shift lever and fittings	16	Transfer case shift control lever and fittings
17	Instruction and warning decals	18	Engine stop control and hand throttle operation
19	Engine idle and maximum RPM	20	Fire extinguisher, test tag and bracket
Electrical			
1	All systems – test for function	2	Lights, switches and sender units
3	Lenses, cabling, grommets, connectors and harness	4	Isolation switch
5	Batteries, cables, clamps and mounts	6	Battery box and grommets
7	Horns, fittings and controls		
Suspension			
1	Springs, mounts and bushes	2	Shock absorbers

Table 1 All Types (continued)

Serial	Description	Serial	Description
Suspension (continued)			
3	Air bags, reservoirs, pipes and mounts	4	Equalising beams and traverse beams
5	Torque rods and mounts	6	Suspension bump stops
Power Train			
1	Transmission and mounts	2	Shift levers and controls
3	Oil cooler, pipes and mounts (if fitted)	4	Propeller shafts and support bearings
5	Transfer case and mounts	6	Transfer case oil cooler, circulation lines and fittings
7	Power divider and mounts	8	Power divider levers, controls, lines and fittings
9	Axle assemblies and mounts	10	Hubs
11	Wheel studs/nuts	12	Wheel bearing pre-load (rim rock)
Brakes			
1	Drums	2	Linings
3	Actuating components	4	Gladhands and connections
5	Reservoirs, pipes, hoses, valves and connectors	6	Function test
Steering			
1	Steering box(s) drive shafts, splines and universal joints	2	Steering drag links, tie rods, tie rod ends and boots
3	King pin bushes	4	Wheel alignment

WARNING

Particular attention is to be made to the door lock striker assembly mounting screws and the second stage of the door lock mechanism for security and operation. Failure of the door latch assembly could result in serious injury or death.

Cargo

8. To complete the TI on the Mack Cargo, the systems and components listed in Table 2 are also to be inspected.

Table 2 Cargo

Serial	Description	Serial	Description
1	Cargo body rope rail	2	Tray to chassis mounts and bolts
3	Tray cross members	4	Tailgate/side gates and hinges
5	Tailgate bump rubbers and bump stops	6	Cargo body side panels, hinges, pins and chains
7	Canopy and canopy bows	8	Cargo body seat and backrest assembly
9	Tray wooden floor		

With Power Take-off

9. To complete the TI on the Mack with power take-off, the systems and components listed in Table 3 are also to be inspected.

Table 3 With Power Take-off

Serial	Description	Serial	Description
1	Hydraulic reservoir, hoses and mounts	2	Hydraulic filter, housing, piping and mounts
3	Pump and valves	4	Drive gear assembly
5	Switches, controls, cables and fittings	6	Functional test

Vehicle Fitted with Twist Locks

10. To complete the TI on the Mack fitted with twist locks, inspect the twist locks for obvious damage.

With Winch

11. To complete the TI on the Mack with winch, the systems and components listed in Table 4 are also to be inspected.

Table 4 With Winch

Serial	Description	Serial	Description
1	Winch mounting	2	Winch controls and piping
3	Winch control cylinder	4	Winch front fairleads and side guide
5	Winch sheave and roller	6	Winch PTO cable and fittings
7	Torque limiter/overload device	8	Winch propeller shaft and support bearings
9	Winch rope	10	Winch operation/cut-out
11	Winch operating instruction decal (in cabin)	12	Functional test

With HIAB Crane

12. To complete the TI on the Mack with HIAB crane, complete all tasks in accordance with EMEI Vehicle A 028-1.

Dump

13. To complete the TI on the Mack dump, the systems and components listed in Table 5 are also to be inspected.

Table 5 Dump

Serial	Description	Serial	Description
1	Body and tailgate	2	Lock assembly
3	Tailgate levers, seals and mounts	4	Body pivots
5	Cylinders and mounts	6	Safety support stay and pivots
7	Reservoirs, hoses, pipes and mounts	8	Filter body and seals
9	Controls	10	Canopy and canopy bows
11	Dump body seat and backrest assembly	12	Functional test

With Water Tank

14. To complete the TI on the Mack with water tank, the systems and components listed in Table 6 are also to be inspected.

Table 6 With Water Tank

+	Description	Serial	Description
1	Shell, hatches and rails	2	Coaming and ladders
3	Walkways and antislip	4	Hose tubes and lockable hinged covers
5	Water pump and mounts	6	Water pump driving motor and couplings
7	Pump gland packing and outrigger bearings	8	Discharge manifold and on/off road control valves
9	Pump discharge control valve	10	Flexible hoses and hose reels
11	Flexible hose ends, connections and seals	12	Hose reel inlet valve
13	Spray bar assembly and controls (if fitted)	14	Internal and external pump start switch
15	Instruction and warning plates	16	Layflat hose
17	Anode block and mounts	18	Barrel bearing mounts on NSN 2320-66-112-8853, in accordance with EMEI Vehicle G 759-1
19	TRAM		

With Fuel Tank

15. To complete the TI on the Mack fuel tanker, the systems and components listed in Table 7 are also to be inspected.

NOTE

Table 7, Serial 15 is only applicable to Truck Tanker Fuel Avn MK 2, NIIN: 2320-66-153-3721. All inspections are in accordance with Table 8.

Table 7 With Fuel Tank

Serial	Description	Serial	Description
1	Hydraulic oil reservoir	2	Fuel pump bearings
3	Filling hose reel drive shafts	4	Tank mounting
5	Fuel transfer/safety and bonding reels	6	Emergency shutdown systems
7	Emergency stop button	8	Rollover sensor
9	Pump shutdown	10	TRAM/handrail
11	Park Brake/Door Open Alarm System	12	Fuel tank and components (Ref EMEI Misc Equip P 009-2)
13	Check that the composite hose hydrostatic test has been certified in the last 12 months (Ref EMEI Misc Equip P 009-1)	14	Check the GM 120 for the date of the last filter monitor filter change. Every 12 months (Ref EMEI Veh G 809 and Misc Equip P009-5).
15	Inspect the Fuel Monitor Assembly (JSPL compliance), IAW the applicable task on the standard jobs. (Ref EMEI Misc Equip P009-2).		

Table 8 Frequency Of Fuel Monitor Assembly Inspection

Serial	Inspection Type	Internal	External
1	Initial Commissioning	Yes	Yes
2	12 - Months Post Commissioning Inspection	Yes	Yes
3	12 - Monthly	No	Yes
4	48 - Monthly	Yes	Yes

Modifications

16. Ensure that all applicable modifications have been incorporated and recorded on the vehicle’s modification plate and that no unauthorised modifications have been made to the vehicle.

Road Test

17. A road test is to be completed in accordance with EMEI Vehicle A 029-2.

Useability Tags and Labels

18. Once materiel has been classified, its useability must be easily identifiable. Adhesive useability labels, e.g. AD204, Label – Fully Functional, AD207, Label – Restricted Use or AD210, Label – Do Not Use XX, are to be affixed as close as practicable to the lower left-hand corner of the windscreen.

Technical Inspection Report

19. Raise and complete a TI Report entering the details of the inspection in Part 2 of the vehicle's GM 120, attaching a copy of the report to the GM 120. The original TI is to be retained with the work order.

END

Distribution List: **VEH G 50.0 – Code 1** (Maint Level)
(Sponsor: CGSVSPO, Mdm/Hvy B Vehicles)
(Authority: EC- 007178)